

CHAPTER 8
AIRPORT PLANS
MASTER PLAN UPDATE

Nogales International Airport
Santa Cruz County

April 2002

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CHAPTER 8 AIRPORT PLANS

8.1 INTRODUCTION

A set of airport layout plans is prepared to graphically depict the proposed improvements for the Nogales International Airport. These drawings, commonly referred to as the Airport Layout Plan (ALP) set, provide the physical details of the long-term development plan. Chapter 9, Implementation, identifies the phasing of this development. Projects eligible to receive federal funding under the Airport Improvement Program (AIP) must be shown on an approved Airport Layout Plan in order to qualify for assistance.

The primary drawing of the Plan set is the Airport Layout Plan (ALP) sheet, which is the overall development plan for the airport, showing both existing and proposed facilities. Other drawings in the set show existing and future airport conditions in terms of airspace, land use, and property ownership.

The ALP set is an important tool for airport development. All ALP set drawings should be reviewed and revised, as appropriate, upon completion of airport improvement projects. Each ALP set submitted for FAA review should include a completed ALP checklist. A reduced version of the ALP set is included at the end of this chapter. Drawings developed in the ALP set for Nogales International Airport include the following:

- Title Sheet and Index
- Airport Layout Plan
- Terminal Area Plan
- Airspace Plan/Part 77
- Approach Plan and Profiles
- On-Airport Land Use Plan
- Off-Airport Land Use Plan /Noise Contour Map
- Airport Property Map

A brief description of the purpose of each drawing follows.

8.2 TITLE SHEET AND INDEX

The Title Sheet and Index serve as an introduction to the ALP set of drawings. This sheet outlines the title and exhibit number of each drawing within the set and identifies the grant numbers associated with federal and state funding.

8.3 AIRPORT LAYOUT PLAN

The Nogales International Airport Layout Plan reflects all projects recommended in the Master Plan Update through the year 2020. In addition, development beyond demand is included for long-term planning and contingency purposes. Some of the key projects for Nogales International include Runway 3-21 widening, relocation of the displaced threshold, land acquisition, perimeter roadway construction, additional hangar development, and cargo apron expansion.

The ALP is incomplete without several other required pieces of information related to the drawings. The Airport Data Table, Runway Data Table, All-Weather Wind Rose, and the Legend are all included on the ALP. Much of this data is illustrated directly on the drawing. This information is given for the existing and future conditions. Data and development issues requiring additional detail are addressed in the general notes.

The Airport Data Table includes information related to the airport overall such as airport elevation, airport reference point (ARP) coordinates, mean maximum daily temperature, and airport reference code. The airport reference code (ARC) is defined in FAA AC 150/5300-13, Airport Design, as a coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to use the airport. The designation "C-II" indicates that aircraft using Nogales International Airport are in Approach Category C, and Airplane Design Group II. Approach Category relates to aircraft approach speed, and Design Group relates to aircraft wingspan.

The Runway Data Table presents the information for each runway such as runway end elevations, approach category, aircraft design group, runway dimensions, runway surface and pavement strength, runway instrumentation, runway lighting and marking, approach aids, and runway safety area dimensions. As shown, the runway dimensions cross-reference a "Declared Distances" table. This table includes four specific runway lengths in accordance with Appendix 14, FAA AC 150/5300-13, Change 6. These runway lengths vary based on the location of the displaced threshold and the limitations associated with the non-standard runway safety area. The Declared Distances Table provides take-off runway available, take-off distance available, accelerate-stop distance available, and landing distance available for both Runway 3 and 21.

The all-weather wind rose, also shown on the ALP sheet, covers wind conditions under all weather conditions. The all-weather wind rose indicates by compass sector the frequencies at which winds in a given velocity range occur. Runway orientation is superimposed on the wind rose and the percentage of wind coverage for the all-weather condition is provided. For Nogales, crosswind coverage is in excess of 99 percent.

A vicinity map and location map are also shown on the ALP sheet. The location map shows the general geographic location of the City and the Airport relative to other cities and towns in the State of Arizona. The vicinity map shows the location of the airport in relation to the City of Nogales.

8.4 TERMINAL AREA PLAN

The Terminal Area Plan represents a large-scale plan view of facilities such as the terminal building, aircraft apron, and parking. Existing and future buildings are located behind the

building restriction line (BRL). The BRL allows building heights up to 28 feet on the west side and 34 feet on the east side.

This plan serves to provide additional detail on the terminal area beyond that included on the ALP sheet.

8.5 AIRSPACE PLAN

Ideally, airports should be located so that the surrounding airspace is free and clear of obstructions that could be hazardous to aircraft. It is necessary to keep the surrounding airspace free from obstacles by preventing, where possible, the development and growth of obstructions that could interfere with the navigation of aircraft.

The regulations for the protection of airspace in the vicinity of airports are established by the definition of a set of "imaginary surfaces" penetration of which is an obstruction affecting navigable airspace. The geometry of these imaginary surfaces is governed by the regulations set forth in Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace.

The Airspace Plan depicts the airspace for Nogales International Airport, showing imaginary surfaces described in FAR Part 77. It is important to illustrate the airspace for the ultimate airport development condition in order to prevent introduction of obstructions that would inhibit realization of the plan. However, numerous terrain penetrations exist. These penetrations are shaded on the airspace drawing (P4) and summarized in an obstruction table. As shown, terrain penetrations reach 262 feet.

The principal imaginary surfaces shown in the airspace plan are:

- Primary Surface
- Approach Surface
- Horizontal Surface
- Transitional Surface
- Conical Surface

8.5.1 Primary Surface

The primary surface is a surface longitudinally centered on a runway. When the runway has a prepared hard surface, the primary surface extends 200 feet beyond each end of the runway. Existing and future Runway 3-21 is a runway with a non-precision approach and a primary surface width of 500 feet.

8.5.2 Approach Surface

The approach surface is a surface longitudinally centered on the extended runway centerline, which extends outward and upward from each end of the primary surface. Approach slope and dimensions are determined for each runway end based on the type of approach.

Runway 3-21, is categorized as a non-precision runway and requires a 34:1 approach slope out a horizontal length of 10,000 feet. The approach surface measures 500 feet at the inner edge, where it matches the primary surface for this runway.

8.5.3 Horizontal Surface

The horizontal surface is a horizontal plane 150 feet above the established airport elevation. Nogales International Airport is at an elevation of 3,952 feet MSL so the horizontal surface is at an elevation of 4,102 feet. The plan dimensions of the horizontal surface are set forth by arcs of specified dimensions from the end of the primary surface. A tangent line connects the arcs. These arcs correspond with the approach surface length described earlier.

8.5.4 Transitional Surface

The transitional surface is an inclined plane with a slope of 7:1 extending upward and outward from the primary and approach surfaces, terminating at the point where they intersect with the horizontal surface or any other surface where more critical restrictions are intercepted. This surface is used in part for establishing the building restriction line at the airport.

8.5.5 Conical Surface

The conical surface is an inclined plane extending upward and outward from the outer boundary of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet. The top of the conical surface is at a height of 350 feet above the airport elevation, which is 4,302 feet MSL for Nogales International.

8.6 APPROACH PLAN AND PROFILES

The Approach Plan and Profiles Drawing provides a detailed look at the physical features near each runway's extended centerline including topography, roads, obstructions and incompatible objects in these critical areas. For Nogales, the primary concern is the significant terrain in the approach to Runway 21, which is the driving factor behind this runway's displaced threshold.

Based on the FAA's recent approval, the displaced threshold on Runway will be relocated. Both the existing and future displaced thresholds and their associated approach slopes are reflected on the profile view.

8.7 ON-AIRPORT LAND USE PLAN

The On-Airport Land Use Plan prepared for Nogales reflects recommended land uses in support of the preferred development plan. Land uses, as described previously in Chapter 7, include airfield operations area; general aviation (GA); cargo; U.S. Customs/ Border Patrol; terminal area; FBO/Flight School; and aviation-compatible industrial park.

8.8 OFF-AIRPORT LAND USE PLAN AND NOISE CONTOUR MAP

The Off-Airport Land Use Plan/Noise Contour Maps illustrate the boundaries of the airport property, designated off-airport land use as designated by the controlling jurisdiction, and noise contours. The County-adopted Airport District Overlay Zone (ADOZ) is also reflected. Chapter 7, Land Use Analysis, presents the details of the noise analysis and resulting 1999 and 2020 drawings, and the background on the ADOZ.

8.9 AIRPORT PROPERTY MAP

The Airport Property Map is the last drawing of the ALP set. This drawing is provided to show details on how the various parcels of land within the boundaries of the airport were acquired. All of the documents recording the land acquisitions are described in a table as well as the type of instrument used to acquire the property. The Property Map also reflects future acquisitions, easements, and/ or use agreements. For Nogales, three parcels of land are proposed for acquisition in fee simple and one parcel of land is proposed for an aviation easement acquisition during the planning period. In addition, a portion of airport property is identified for conveyance so a proposed access road may be developed off-airport on an adjacent property. This conveyance and roadway development will allow the termination of the existing roadway easement which runs through the Runway 3 RPZ. The roadway easement provides the adjacent private property owner access to their property.

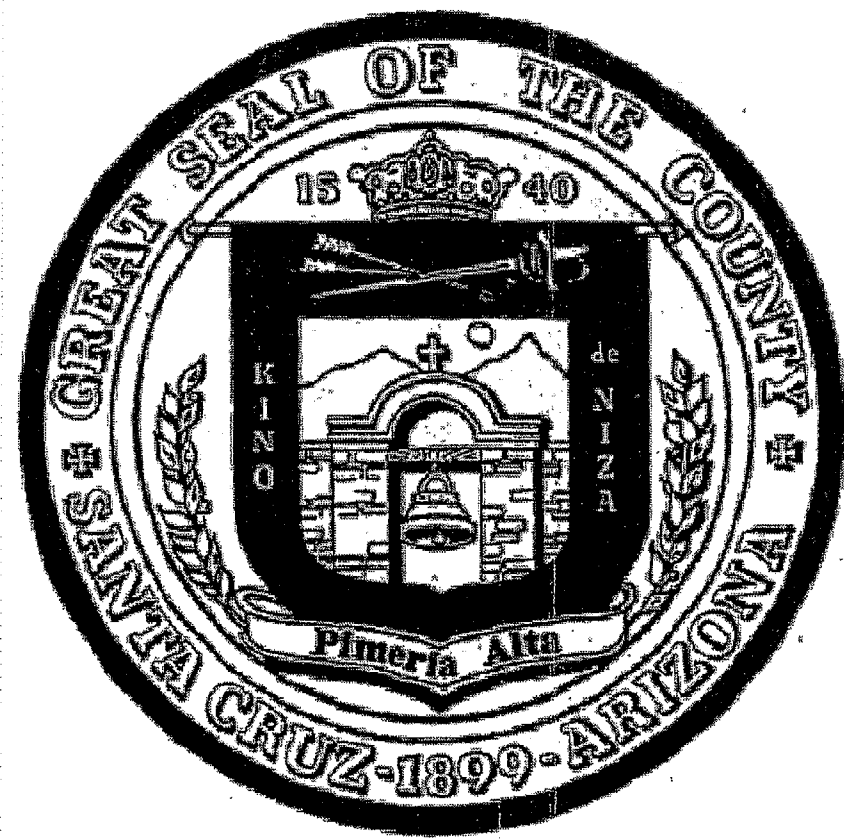
NOGALES INTERNATIONAL AIRPORT


NOGALES, ARIZONA

AIRPORT MASTER PLAN UPDATE
AIRPORT LAYOUT PLANS
AIP NUMBER: 03-04-0009-03
ADOT GRANT NO. EO129

SHEET INDEX

NO.	DESCRIPTION
P1	COVER SHEET
P2	AIRPORT LAYOUT PLAN
P3	TERMINAL AREA PLAN
P4	PART 77 AIRSPACE PLAN
P5	RUNWAY 3 APPROACH PLAN AND PROFILE
P6	RUNWAY 21 APPROACH PLAN AND PROFILE
P7	OFF - AIRPORT LAND USE/ 1998 NOISE MAP
P8	OFF - AIRPORT LAND USE/ 2020 NOISE MAP
P9	ON - AIRPORT LAND USE PLAN
P10	AIRPORT PROPERTY MAP





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1. Master Plan and ALP Update		LT	PT	03/02
Revision		By	Appd.	Date
File Name: 1-Nog-Cover.dwg		LT	PT	12/01
		Dwn.	Dsgn.	Date
Title				
COVER SHEET				
NOGALES INTERNATIONAL AIRPORT				
NOGALES, ARIZONA				
Project No.				
81451310				
Drawing No.		Sheet	Revision	
P1		1 of 10	1	

RUNWAY DATA TABLE			REV 3/21
DATA ELEMENTS	EXISTING (E)	FUTURE (F)	
RUNWAY CATEGORY/DESIGN GROUP CODE	C-3	SAF	
RUNWAY AZIMUTH	46°22'34"	SAF	
RUNWAY BEARING (TRUE)	N 46°22'34" E	SAF	
MINIMUM RUNWAY ELEVATION (MSL)	3952	SAF	
COVERAGE (%)	12 MPH	99.03%	SAF
	15 MPH	99.57%	SAF
	18 MPH	99.94%	SAF
RUNWAY DIMENSIONS (SEE DECLARED DISTANCES)	7300'	SAF	
RUNWAY INSTRUMENTATION	NP/HP	SAF	
APPROACH SLOPE	1 MILE	SAF	
APPROACH VISIBILITY MINIMUMS	1512	SAF	
THRESHOLD DISPLACEMENT	WIDTH	SAF	
RUNWAY STOPWAY	LENGTH	SAF	
RUNWAY SAFETY AREA (RSA) (SEE NOTE 4)	WIDTH	SAF	
OBJECT FREE AREA	LENGTH BEYOND RUNWAY END	SAF	
	WIDTH	SAF	
OBSTACLE FREE ZONE	LENGTH BEYOND RUNWAY END	SAF	
	WIDTH	SAF	
PAVEMENT STRENGTH	POUNDS (1000)	SAF	
	TYPE	SAF	
RUNWAY SURFACE TYPE	ASPHALT	SAF	
PAVEMENT SURFACE TREATMENT	COAT TAR	SAF	
RUNWAY MARKING	NON-PRECISION	SAF	
RUNWAY EFFECTIVE GRADIENT (%)	1.61%	SAF	
RUNWAY LIGHTING (LRL, MRL, HRL)	MRL	SAF	
RUNWAY APPROACH LIGHTING (ODALS, MALS, ETC.)	NONE	SAF	
NAVAIDS (ILS, NDB, GPS)	VOR, NDB	SAF	
VISUAL AIDS (GYL, REL, ETC.)	SAVAS, REL	SAF	
FAR PART 77 CATEGORY	NP/HP	SAF	

* SEE GENERAL NOTE 5

AIRPORT BUILDINGS/FACILITIES		
EXISTING (E)	FUTURE (F)	DESCRIPTION
(1)		TERMINAL
(2)		AUTO PARKING
(3)		FBO
(4)	(A)	HANGARS
(5)		T-1 HANGARS
(6)	(B)	FUEL TANK
(7)		INDUSTRIAL BUILDING
(8)		WATER TANK AND PUMP
(9)	(C)	APRON
(10)		OLD APRON
(11)	(D)	CARGO
(12)		ARFF BUILDING
(13)		CONTROL TOWER
(14)		MAINTENANCE BUILDING
(15)		EMERGENCY GENERATOR

TAXIWAY DATA TABLE									
DATA ELEMENTS	T/W A		T/W B		T/W C		T/W D		
TAXIWAY SURFACE TYPE	EXISTING (E)	FUTURE (F)	EXISTING (E)	FUTURE (F)	EXISTING (E)	FUTURE (F)	EXISTING (E)	FUTURE (F)	
TAXIWAY MARKING	A.C.	SAF	A.C.	SAF	A.C.	SAF	A.C.	SAF	
TAXIWAY LIGHTING (REFLECTORS, MTL)	CENTERLINE	SAF	CENTERLINE	SAF	CENTERLINE	SAF	CENTERLINE	SAF	
	REFLECTORS	MTL	REFLECTORS	MTL	REFLECTORS	MTL	REFLECTORS	MTL	
DATA ELEMENTS	T/W E		T/W F		T/W A1		T/W D1		
TAXIWAY SURFACE TYPE	EXISTING (E)	FUTURE (F)	EXISTING (E)	FUTURE (F)	EXISTING (E)	FUTURE (F)	EXISTING (E)	FUTURE (F)	
TAXIWAY MARKING	A.C.	SAF	A.C.	SAF	A.C.	SAF	A.C.	SAF	
TAXIWAY LIGHTING (REFLECTORS, MTL)	CENTERLINE	SAF	CENTERLINE	SAF	CENTERLINE	SAF	CENTERLINE	SAF	
	REFLECTORS	MTL	REFLECTORS	MTL	REFLECTORS	MTL	REFLECTORS	MTL	

LEGEND		
DATA ELEMENTS	EXISTING (E)	FUTURE (F)
AIRPORT PROPERTY LINE	---	---
AIRPORT REFERENCE POINT	+	+
AIRPORT ROTATING BEACON	○	○
BUILDINGS	■	■
SEGMENTED CIRCLE/WIND CONE (LIGHTED)	○	○
ASOS	○	○
RUNWAY THRESHOLD LIGHTS	---	---
RUNWAY END IDENTIFIER LIGHTS (REL)	---	---
PAV	---	---
SAVAS	---	---
RUNWAY LIGHTS	---	---
FENCING	---	---
TOPOGRAPHIC CONTOURS	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
OBJECT FREE AREA (OFA)	---	---
RUNWAY SAFETY AREA (RSA)	---	---
OBSTACLE FREE ZONE (OFZ)	---	---
SECTION CORNERS	---	---
AVIATION EASEMENT	---	---
ULTIMATE DEVELOPMENT	---	---
HELIPORT	---	---
NDB	---	---
TVOR/DME	---	---

GENERAL NOTES

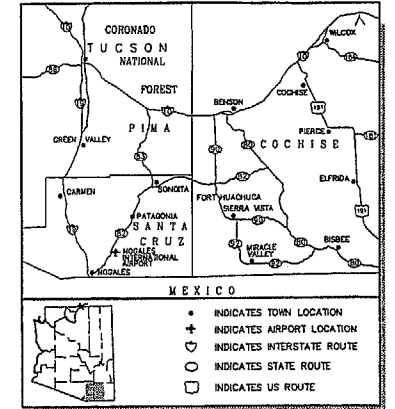
- NAD 83 USED FOR ALL LATITUDE/LONGITUDE IDENTIFICATIONS (PRIOR ALP REPORTS HAD 27 LATITUDE/LONGITUDE IDENTIFICATIONS).
- RUNWAY IS 80 FEET WIDE FOR 6,000 FEET OF RUNWAY LENGTH AND 100 FEET WIDE FOR LAST 1,200 FEET OF RUNWAY LENGTH AT NORTH END.
- THREE PARCELS ARE IDENTIFIED AS TO BE ACQUIRED; THE AIRPORT FENCELINE INCLUDES ALL THREE PARCELS SINCE THESE PARCELS WERE MISTAKENLY IDENTIFIED AS PART OF AIRPORT PROPERTY IN THE PAST. THE FENCELINE WILL REMAIN IN ITS CURRENT LOCATION ADJACENT TO THESE PARCELS AS THE COUNTY PLANS TO ACQUIRE THE PARCELS BEFORE 2005.
- EXISTING RSA DIMENSIONS ON BOTH RUNWAY ENDS MEET 8-1 STANDARDS OR LESS. AS SAFETY AREA ONLY EXTENDS 150' BEYOND RUNWAY END.
- LAND USE ADJACENT TO AND SURROUNDING AIRPORT PROPERTY BOUNDARY IS GENERAL RURAL (PER COUNTY ZONING). SEE OFF-AIRPORT LAND USE MAP.
- BRL ALLOWS BUILDING HEIGHT OF 28' WEST OF RUNWAY (450') AND 34' EAST OF RUNWAY (450').
- TO BE RELOCATED (F) OR DECOMMISSIONED LATER WITH ACTIVATION OF GPS (F).
- SEE TERMINAL AREA PLAN FOR TERMINAL AREA SECURITY FENCING LAYOUT AND ADDITIONAL SECURITY LIGHTING.
- TORA - TAKEOFF RUN AVAILABLE
TODA - TAKEOFF DISTANCE AVAILABLE
ASDA - ACCELERATE DISTANCE AVAILABLE
LDA - LANDING DISTANCE AVAILABLE

DEVIATION FROM STANDARDS			
STANDARD	AIRPORT ELEMENT	ACTUAL	REMARKS
RUNWAY SAFETY AREA (RSA) - R3	400' WIDE	150' WIDE	TO BE UPGRADED TO STANDARDS IN 2002
RUNWAY SAFETY AREA (RSA) - R21	1000' BEYOND RUNWAY END	800' BEYOND RUNWAY END	TO BE UPGRADED TO STANDARDS IN 2002

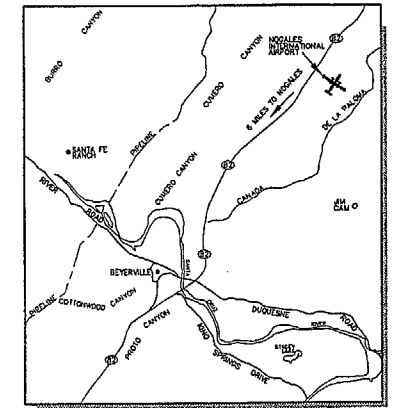
DECLARED DISTANCES			
	RUNWAY 3	RUNWAY 21	
TORA	7200 (E) (F)	6350 (E) 7200 (F)	
TODA	7200 (E) (F)	7200 (E) (F)	
ASDA	7200 (E) (F)	6350 (E) 7200 (F)	
LDA	7200 (E) (F)	4438 (E) 5450 (F) 6300 (F)	

(SEE NOTE 9)

RUNWAY END COORDINATES		
RUNWAYS	EXISTING	FUTURE
RUNWAY 3	LAT. 31°24'39.233"N LONG. 110°51'22.40"W	SAF
RUNWAY 21	LAT. 31°25'28.422"N LONG. 110°50'22.280"W	SAF
RUNWAY 21 (E)	LAT. 31°25'15.334"N LONG. 110°50'38.255"W	31°25'22.274"N 110°50'29.805"W



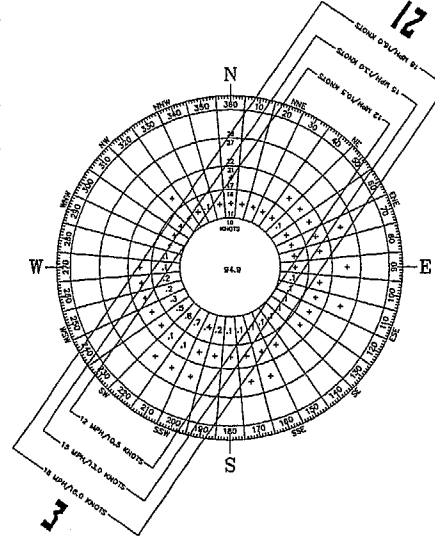
AIRPORT LOCATION MAP



VICINITY MAP

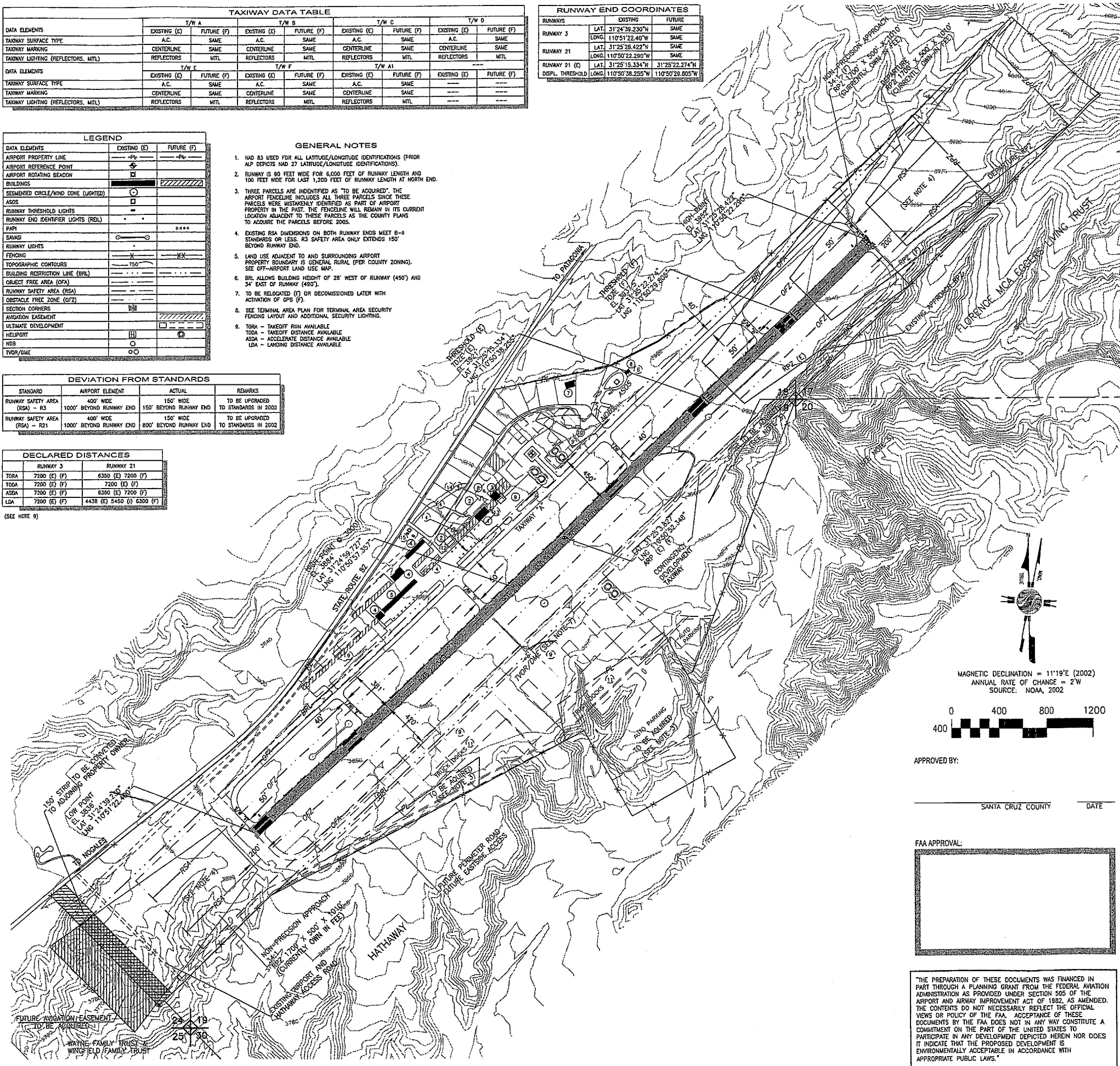
AIRPORT DATA TABLE		
AIRPORT:	NOGALES INTERNATIONAL AIRPORT	
RANGE AND TOWNSHIP:	R 16 E, T 23 S	
COUNTY:	SANTA CRUZ COUNTY	
OWNER:	SANTA CRUZ COUNTY	
DATA ELEMENTS	EXISTING (E)	FUTURE (F)
AIRPORT NPAS CATEGORY	GA	TRANSPORT
DESIGN AIRCRAFT	SUPER KINGAIR	SAF
AIRPORT REFERENCE CODE	C-3	SAF
AIRPORT ELEVATION (FEET/MSL)	3952	SAF
MEAN MAXIMUM TEMPERATURE (FAHRENHEIT/HOTTEST MONTH)	93.8 F	SAF
AIRPORT REFERENCE POINT (ARP)	LAT. 31°25'03.827"N LONG. 110°50'52.348"W	SAF
AIRPORT & TERMINAL NAVIGATIONAL AIDS (ON- AND OFF-AIRPORT)	BEACON REL	SAF
INSTRUMENT APPROACH TYPES (GPS, VOR, ILS, ETC.)	NDB, VOR	SAF

*Previous ALP identified airport reference code as B-II. Airport currently experiences C-II traffic on a regular basis.

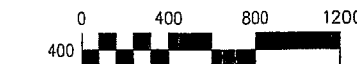


ALL WEATHER WIND COVERAGE*			
RUNWAYS	12 MPH (13 knots)	15 MPH (17 knots)	18 MPH (21 knots)
RUNWAY 3-21	99.03%	99.57%	99.94%

* 59,847 ALL WEATHER OBSERVATIONS



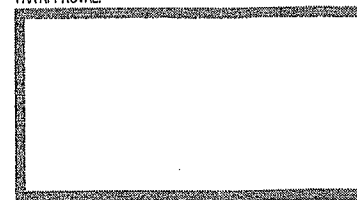
MAGNETIC DECLINATION = 11°19'E (2002)
ANNUAL RATE OF CHANGE = 2'W
SOURCE: NOAA, 2002



APPROVED BY:

SANTA CRUZ COUNTY DATE

FAA APPROVAL:



"THE PREPARATION OF THESE DOCUMENTS WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, AS AMENDED. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

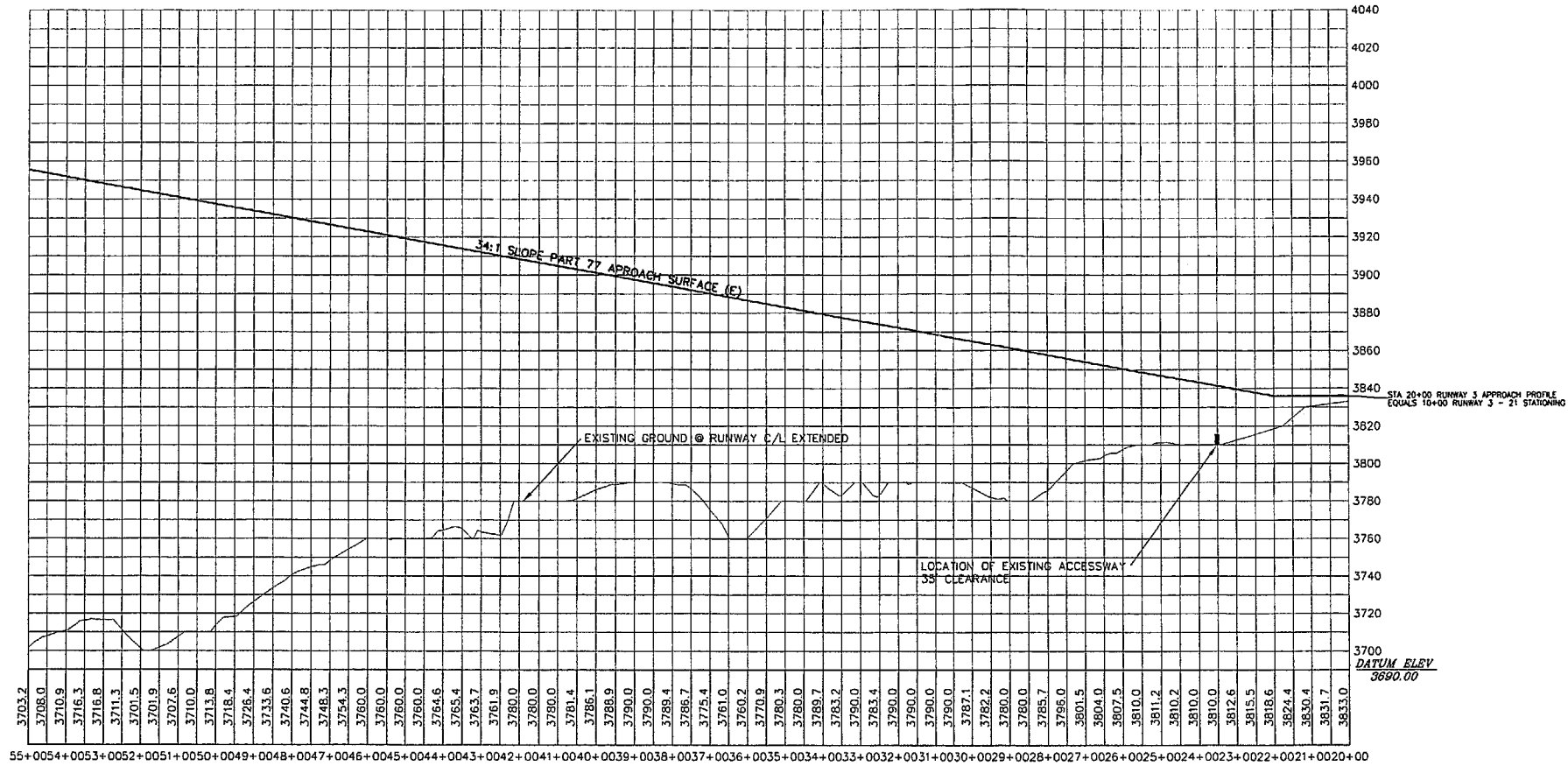


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MP UPDATE	PT	03/02
1. ADDENDUM NO.1-FAA FORM 74801-1	AM	8/01
Revision	By	Appd. Date
File Name: 2-Nag-olp.dwg	LT	PT
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		12/01

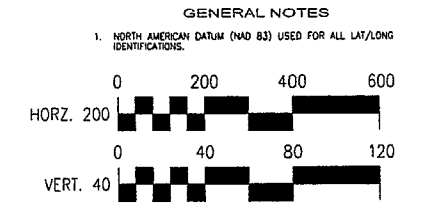
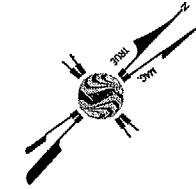
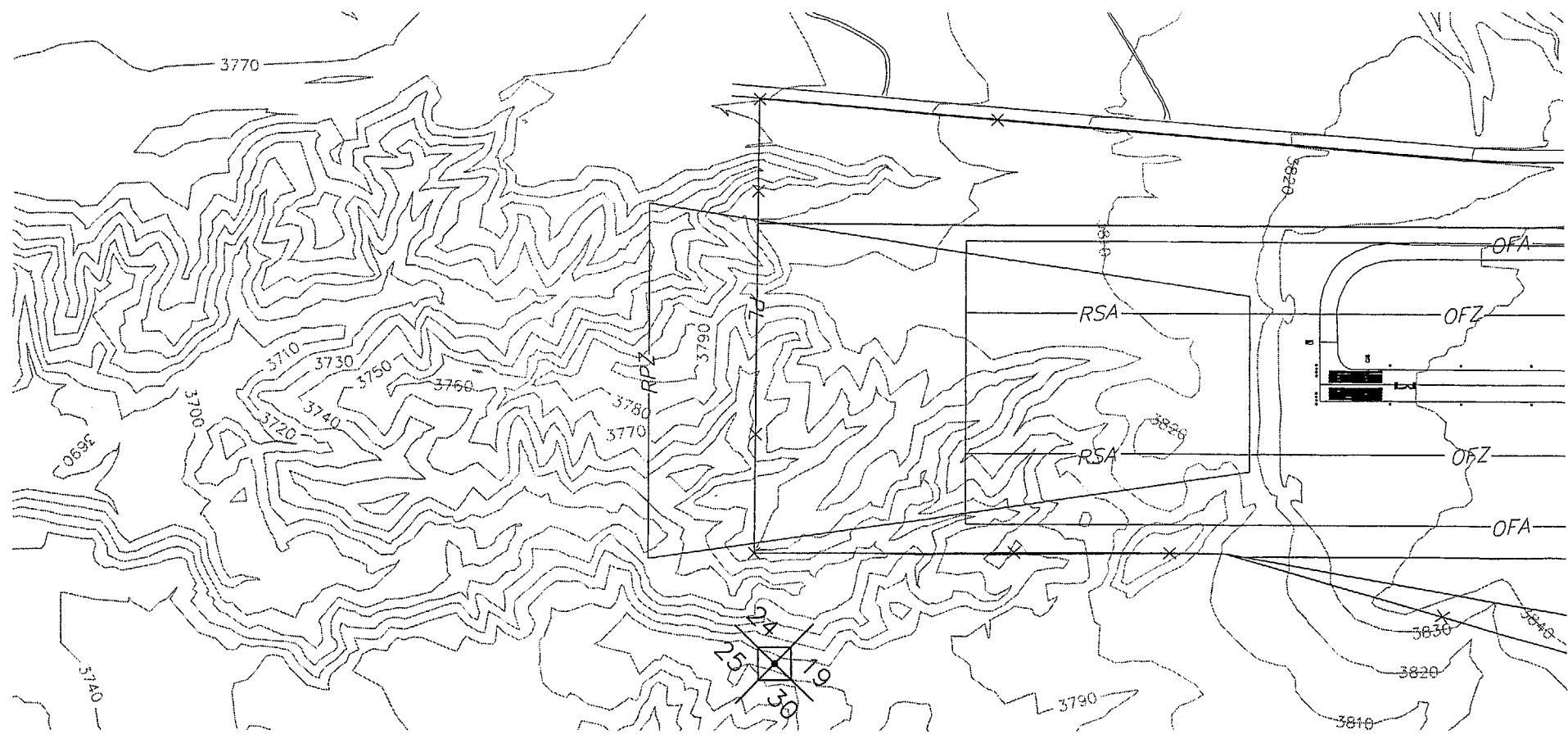
Title
AIRPORT LAYOUT PLAN
NOGALES INTERNATIONAL AIRPORT
NOGALES, ARIZONA

Project No.	81451310
Drawing No.	Sheet
	Revision



LEGEND	
DATA ELEMENTS	KEY
PART 77 APPROACH SURFACE	---
20:1 SLOPE (OFF R/WY END)	---
EXISTING GROUND	---
TOPOGRAPHIC CONTOURS	--- 750 ---
AIRPORT PROPERTY LINE	PL
AIRPORT FENCE LINE	X

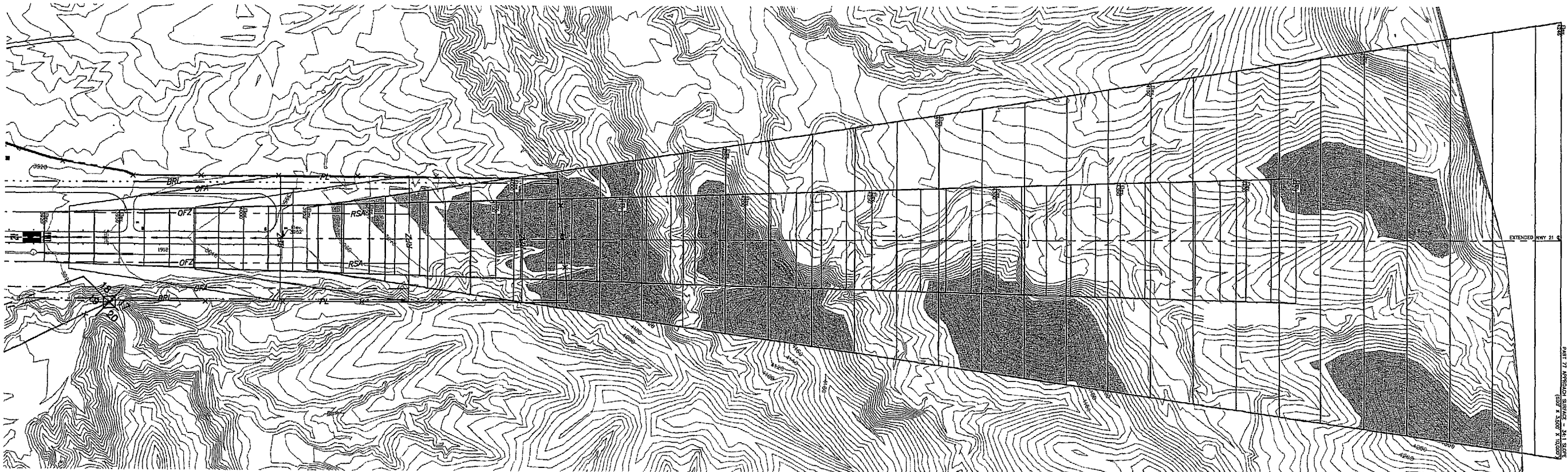
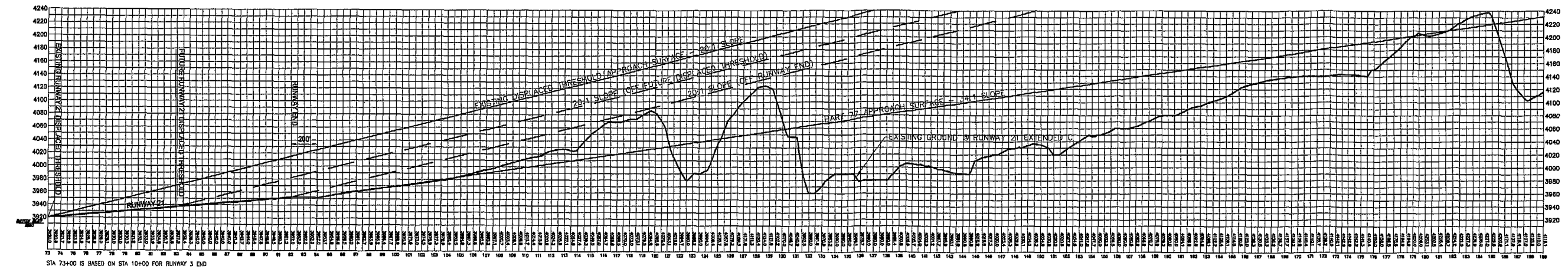
- GENERAL NOTES
1. TERRAIN PENETRATION DEPICTED REFERS TO PENETRATION TO THE PART 77 SURFACE ONLY.
 2. THE EXISTING APPROACH SURFACE IS CLEAR OF ANY OBSTRUCTIONS.
 3. NAD 83 USED FOR ALL LATITUDE/LONGITUDE IDENTIFICATIONS (MOST CURRENT ALP DEPICTS NAD 27 LATITUDE/LONGITUDE IDENTIFICATIONS).
 4. RUNWAY 3 LATITUDES/LONGITUDE COORDINATES:
RUNWAY END:
N 31° 24' 38.230" W 110° 51' 22.400"



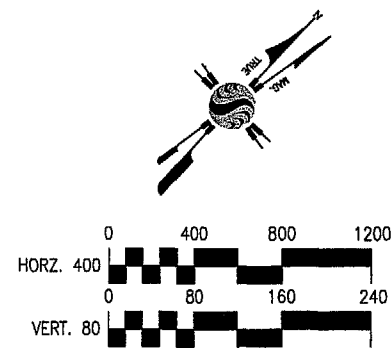
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Phoenix AZ U.S.A.
85044
Tel. 602.438.2200
Fax. 602.431.9562
www.stantec.com

1. MASTER PLAN AND ALP UPDATE				LT	PT	03/02
Revision	By	Appd.	Date			
File Name: 4-Nag-rwy-3-profile.dwg	RC	WR	12/01			
	Dwn.	Dsgn.	Dsgn.	Date		
Title						
RUNWAY 3 APPROACH PLAN AND PROFILE						
NOGALES INTERNATIONAL AIRPORT						
NOGALES, ARIZONA						
Project No.	Scale					
81451310						
Drawing No.	Sheet	Revision				
P5						

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--PLOT-- 11/16/2003 10:00:00 AM Plotter: HP DesignJet 500 Plot Driver: HP DesignJet 500 PCL6
User: jkelly



LEGEND	
DATA ELEMENTS	KEY
TERRAIN PENETRATION (SEE NOTE 1)	
PART 77 APPROACH SURFACE	
EXISTING DISPLACED THRESHOLD APPROACH SURFACE	
ADJUSTED 20:1 SLOPE (OFF Rwy END)	
EXISTING GROUND	
TOPOGRAPHIC CONTOURS	
AIRPORT PROPERTY LINE	
AIRPORT FENCE LINE	



- GENERAL NOTES**
- TERRAIN PENETRATION DEPICTED REFERS TO PENETRATION TO THE PART 77 SURFACE ONLY. SEE P4 FOR PENETRATION DATA.
 - THE EXISTING DISPLACED THRESHOLD APPROACH SURFACE IS CLEAR OF ANY OBSTRUCTIONS.
 - NAD 83 USED FOR ALL LATITUDE/LONGITUDE IDENTIFICATIONS (MOST CURRENT ALP DEPICTS NAD 27 LATITUDE/LONGITUDE IDENTIFICATIONS).
 - RUNWAY 21 LATITUDES/LONGITUDE COORDINATES:
 RUNWAY END: N 31° 25' 28.422" W 110° 50' 22.290"
 EXISTING DISPLACED THRESHOLD: N 31° 25' 15.334" W 110° 50' 38.225"
 FUTURE DISPLACED THRESHOLD: N 31° 25' 22.274" W 110° 50' 29.805"

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1. ADDENDUM NO. 1—FAA FORM 74801-1	LT	03/02
Revision	By	Appd. Date
File: 5-Nog-rwy-21profile.dwg	LT	12/01
	Dwn. Dsgn. Dsgn.	Date

Title
RUNWAY 21 APPROACH PLAN AND PROFILE
NOGALES INTERNATIONAL AIRPORT
NOGALES, ARIZONA

Project No.
 81451310

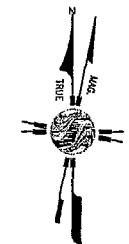
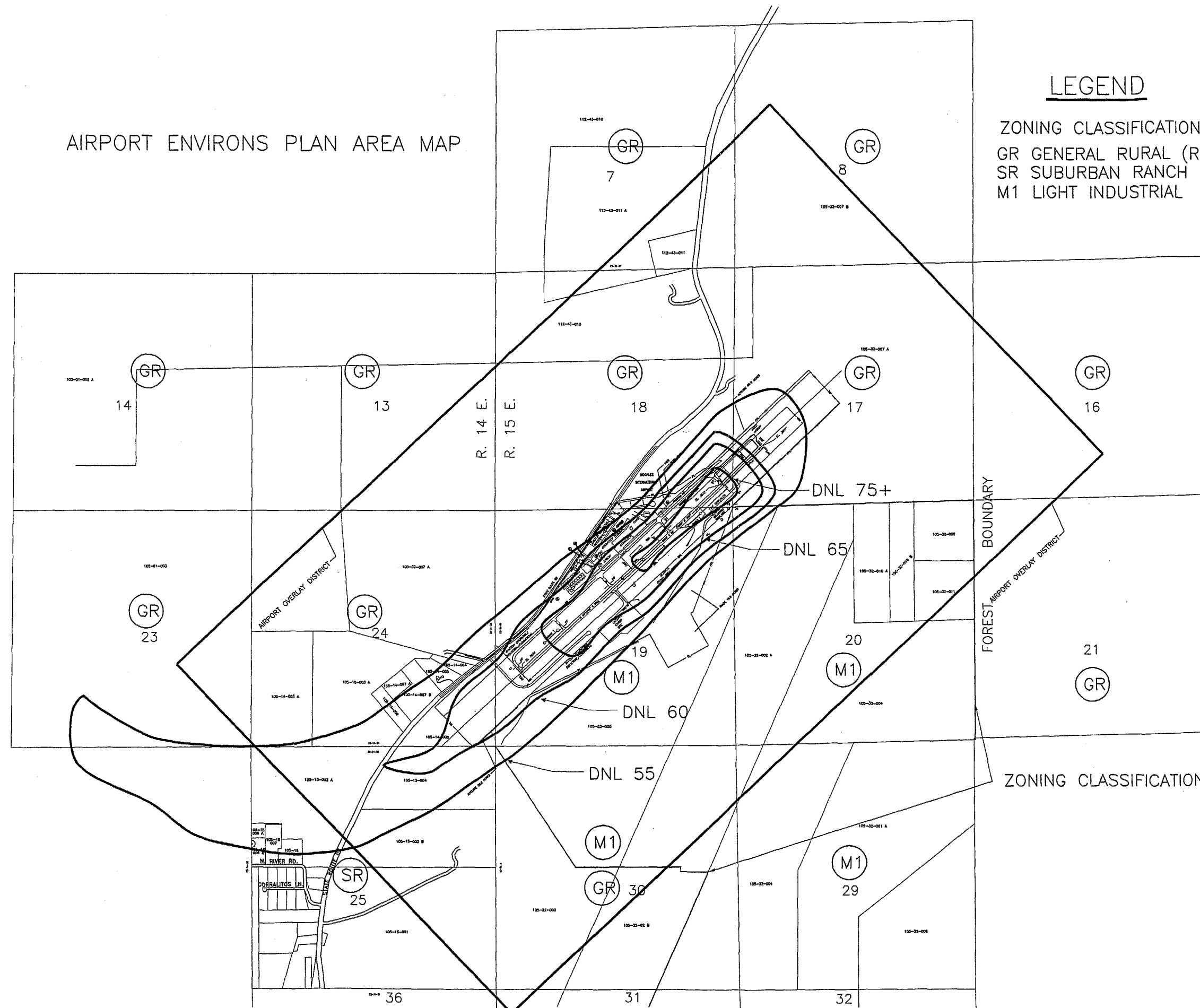
Drawing No. Sheet Revision
 P6 6 of 10 1

AIRPORT ENVIRONS PLAN AREA MAP

LEGEND

ZONING CLASSIFICATION

GR GENERAL RURAL (RESIDENTIAL)(1/4.1 ACRES)
SR SUBURBAN RANCH (RESIDENTIAL)(1/1.7 ACRES)
M1 LIGHT INDUSTRIAL



GENERAL NOTES

1. NORTH AMERICAN DATUM (NAD 83) USED FOR ALL LAT/LONG IDENTIFICATIONS.



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1. MASTER PLAN AND ALP UPDATE	LT	PT	03/02
Revision	By	Appd.	Date
File Name: 8-Neg-1998-noise.dwg	LT	PT	12/01
	Dwn.	Dsgn.	Date
Title			
OFF-AIRPORT LANDUSE/1999 NOISE MAP			
NOGALES INTERNATIONAL AIRPORT			
NOGALES, ARIZONA			

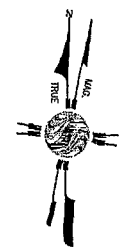
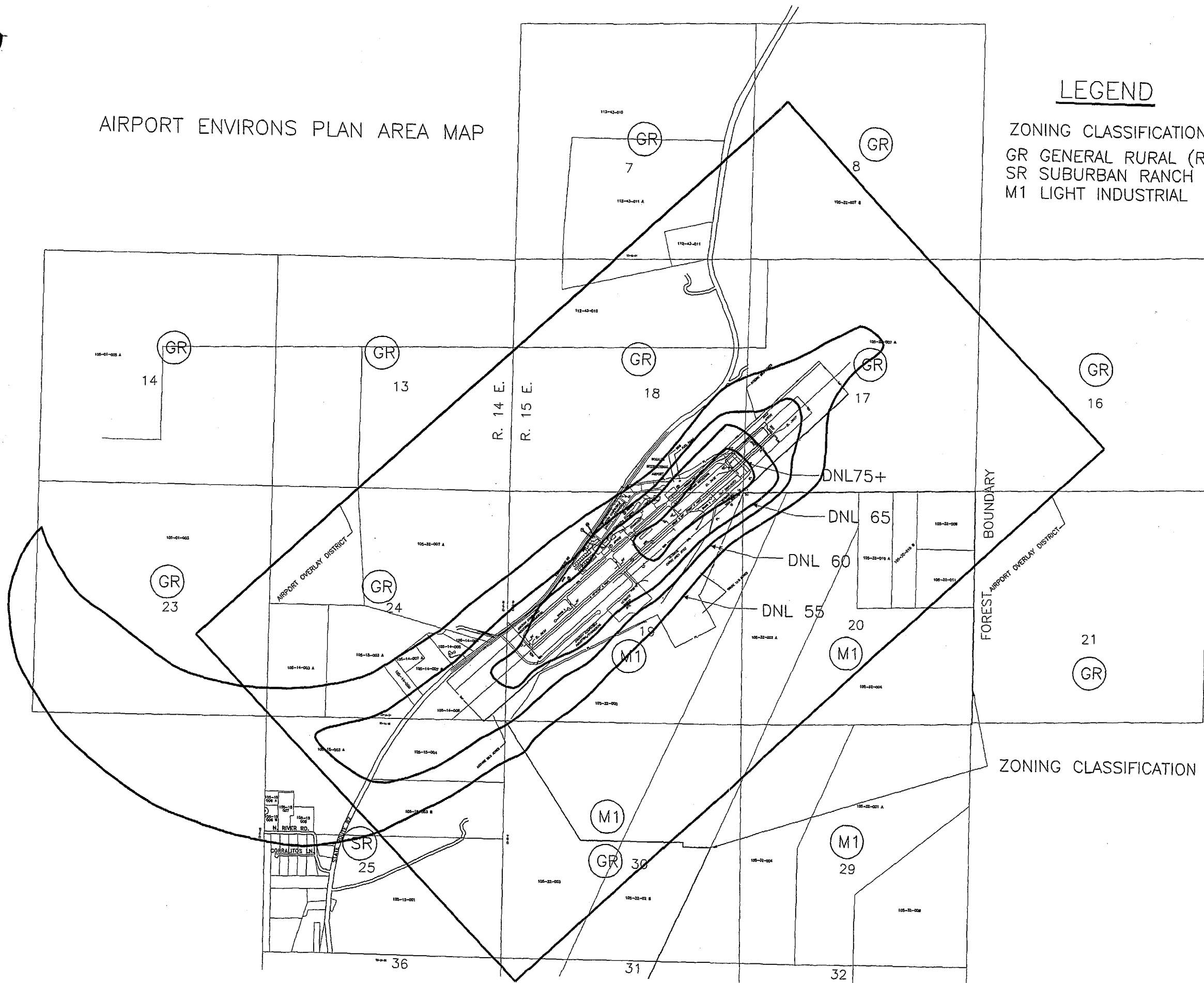
Project No.	Scale
81451310	
Drawing No.	Sheet
P7	7 of 10
Revision	1

AIRPORT ENVIRONS PLAN AREA MAP

LEGEND

ZONING CLASSIFICATION

GR GENERAL RURAL (RESIDENTIAL)(1/4.1 ACRES)
SR SUBURBAN RANCH (RESIDENTIAL)(1/1.7 ACRES)
M1 LIGHT INDUSTRIAL



GENERAL NOTES

1. NORTH AMERICAN DATUM (NAD 83) USED FOR ALL LAT/LONG IDENTIFICATIONS.



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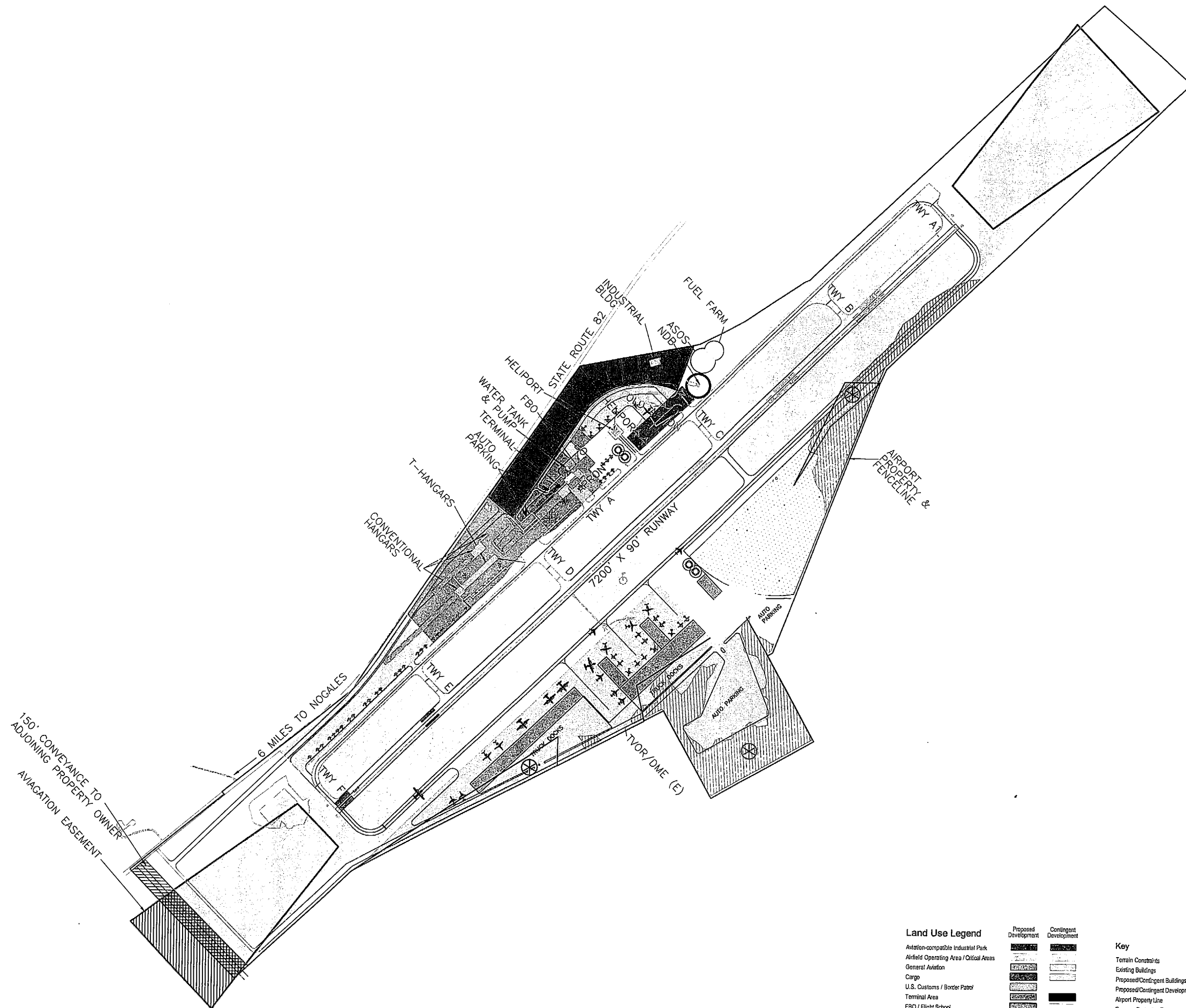
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1. MASTER PLAN AND ALP UPDATE	LT	PT	03/02
Revision	By	Appd.	Date
File Name: 9-Nog-2020-noise.dwg	LT	PT	12/01
	Dwn.	Dsgn.	Date

Title
OFF-AIRPORT LANDUSE/2020 NOISE MAP
NOGALES INTERNATIONAL AIRPORT
NOGALES, ARIZONA

Project No.	Scale
81451310	
Drawing No.	Sheet
P8	8 of 10
Revision	1

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Land Use Legend

Aviation-compatible Industrial Park
Airfield Operating Area / Critical Areas
General Aviation
Cargo
U.S. Customs / Border Patrol
Terminal Area
FBO / Flight School

Proposed Development
Contingent Development
Existing Buildings
Proposed/Contingent Buildings
Proposed/Contingent Development
Airport Property Line
Runway Protection Zone
Land to be Acquired

Key

Terrain Constraints
Existing Buildings
Proposed/Contingent Buildings
Proposed/Contingent Development
Airport Property Line
Runway Protection Zone
Land to be Acquired

GENERAL NOTES

1. NORTH AMERICAN DATUM (NAD 83) USED FOR ALL LAT/LONG IDENTIFICATIONS.
0 400 800 120
400



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1. MASTER PLAN AND ALP UPDATE	LT	PT	03/02
Revision	By	Appd.	Date
File Name: 10-nog-on-airport.dwg	LT	PT	12/01
	Dwn.	Dsgn.	Date

Title
**ON-AIRPORT LANDUSE PLAN
NOGALES INTERNATIONAL AIRPORT
NOGALES, ARIZONA**

Project No.	Scale
81451310	
Drawing No.	Sheet
P9	9 of 10
Revision	1

